surge assure™

industrial protection for your home.

A Division of ADVANCED PROTECTION TECHNOLOGIES INC.

2015 PRODUCT CATALOG

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WHOLE HOME PROTECTION

How can surge**assure**™ *protect my home and increase the life of my electronic equipment?*

surge**assure**™ divides your home into *FOUR LINES* of protection. Each type of protection works with the other to create whole home surge protection.

MAIN ZONE

1

Panel
Surge Protectors

The **FIRST LINE** of defense is the key to protecting your home. Panel Surge Protectors are installed at the main power panel, cable TV/satellite service and telephone service.

2

Cable/Phone
Surge Protectors

The **SECOND LINE** of defense designed to protect coaxial cable lines and phone lines.

INTERIOR ZONE

3

Interior
Surge Protectors

The **THIRD LINE** of defense is for sensitive electronics inside the home.

EXTERIOR ZONE

4

Exterior
Surge Protectors

The **FOURTH LINE** of defense is for equipment located outside the home such as the HVAC, pool equipment and generators.

Today's homes are more reliant than ever on appliances and electronics that are controlled by extremely sensitive microprocessor circuits. These circuits are easily damaged or disrupted by power surges originating both inside and outside the home. surge**assure**™ has developed a line of residential protection products designed to protect the electrical and electronic equipment in your home using Whole Home Protection.

What are power surges and where do they come from?

- Extremely brief spikes in electrical power that burn up electrical circuits inside appliances and electronic equipment.
- 30% enter the home through the power lines, telephone lines and cable TV/satellite lines. These are the most damaging.
- 70% are generated by equipment inside the home from motors and large appliances turning off and on.

What damage can power surges cause?

- PHYSICAL DAMAGE: The most noticeable and dramatic, these are the result of large power surges originating outside the home.
- DISRUPTION: The computer locks up or shuts down, the DVD player malfunctions, the washing machine shuts down before the end of the cycle.
- DEGRADATION: Also called "electronic rust," shortens the lifespan of your equipment so that it mysteriously stops working sooner than one would expect.

STAGE 1

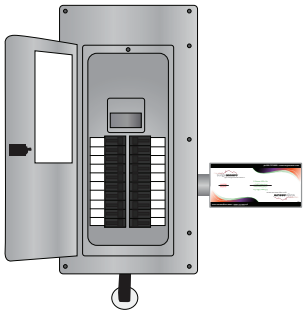
PANEL
SURGE PROTECTORS

S50A

SA Series

Hardwired Whole House Panel Protectors

PROTECTS: Electrical Appliances from damaging surges that enter through the main electrical service panel



INSTALLED: At the main electrical panel

STAGE 2

CABLE/PHONE
SURGE PROTECTORS

SAVFFF
Coax Protector

SAT1
Plug In Phone Line Protector

SATH2
Hardwired Phone Protector

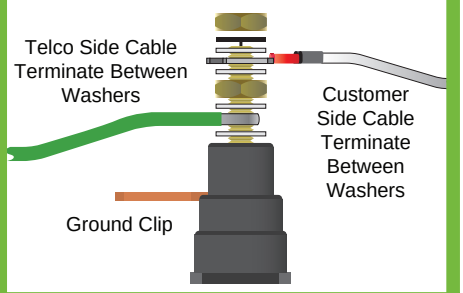
SATHW2
SATH2 In Weatherproof Housing

PROTECTS:
Television signal inputs and other coaxial connected electronics

PROTECTS:
Telephone, DSL or modem connected electronics

INSTALLED: At the incoming coax cable line from the cable/satellite company

INSTALLED: At the incoming telephone service using plug-in connections



INSTALLED: At the incoming telephone service using hard wired connection

STAGE 3

INTERIOR
SURGE PROTECTORS

SAS8T2V2
8 Outlet Plug Strip
Coax and Phone

SAP6T2V1
6 Outlet Wall Plug
1 Coax and 2 Phone

SAP1
1 Outlet Wall Plug

NOTE: **FOR FULL PROTECTION USE SA PANEL PROTECTORS (TE1C40/S50A) IN ADDITION TO INTERIOR PLUG PROTECTORS**

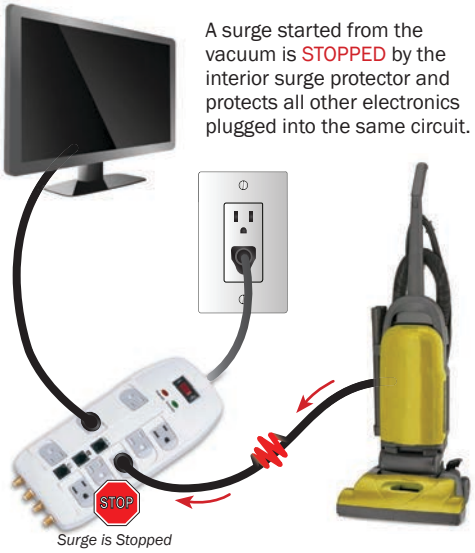
PROTECTS: Any electrical appliance thats plugs into an outlet, excluding heavy duty appliances such as a stove that uses a 240 outlet or hardwired appliance (hot water heater, HVAC, hot tub, etc.)

UNPROTECTED

A surge starts when the vacuum is turned on, and continues to all electronics plugged into the same circuit.

PROTECTED

A surge started from the vacuum is STOPPED by the interior surge protector and protects all other electronics plugged into the same circuit.



Surge is Stopped

INSTALLED: At an interior wall outlet

Any appliance plugged in at the same circuit is at risk to receive surges from load switching appliances such as vacuums, washing machine's spin cycle, air handlers, refrigerators, hair dryers, etc.

STAGE 4

EXTERIOR
SURGE PROTECTORS

SPDEE

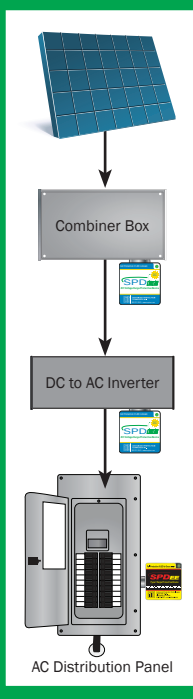
S50A
Hardwired
Point-of-Use
Protectors

PROTECTS:
Pool Equipment, HVAC, Generator, Water Heater, Irrigation System, Landscape Lighting, etc.

INSTALLED:
At an exterior service disconnect or panel

SPDEE DC
Hardwired
Point-of-Use
Protector

PROTECTS:
DC Photovoltaic Systems, DC Combiner Boxes & DC Inverters



INSTALLED:
At the line-side or load-side of the main disconnect

STAGE 1

surgeassure™
PANEL SURGE PROTECTOR
SA Series

FEATURES & BENEFITS

- **UL 1449 Listed Type 2 Surge Protective Device**
- **Rated for 120/240V split phase panels up to 400 Amps**
- **Installation flexibility**
- **Audible Alarm**
- **Internal diagnostics keep you informed**
- **Reference to Ground Monitoring**
- **10 Year product warranty**

The surge**assure**™ SA Series shields motor-driven appliances in residential and light commercial applications against electrical power surge damage entering through the main electrical service panel.

Multiple parallel MOV technology with individual thermal disconnectors to prevent catastrophic failure.

Two LED lights indicate protection status. An Audible Alarm alerts you when protection is disrupted.

Unique Reference to Ground Monitoring Circuit provides notification if excessive Neutral-Ground voltage is present: A red indicator light will flash and the Audible Alarm will activate.

Major household electrical and electronic equipment are covered against surge damage from the utility for 10 years when an SA Series surge protective device is installed by a licensed electrician.

TECHNICAL SPECIFICATIONS

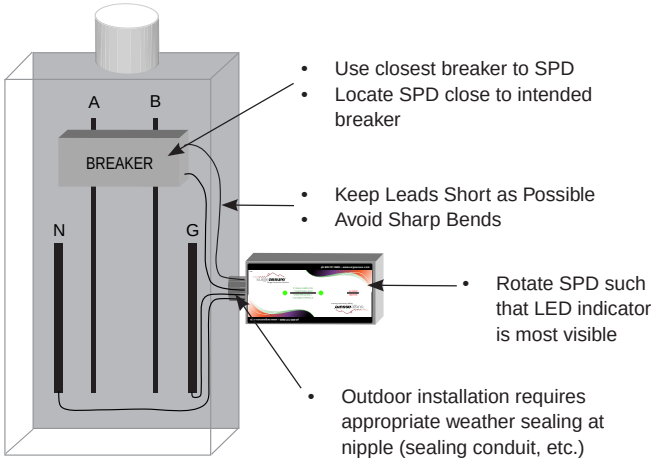
AC SURGE PROTECTION	
Thermal Fusing	Yes
Catastrophic Surge Circuit	Yes
Surge Spike Capacity	60,000 Amps
Line Voltage	120/240 Split Phase 50/60 Hz
UL 1449 VPR	800V
Rated Voltage	150V
Response Time	<1 nanosecond
Short Circuit Current Rating	100,000 Amps
NEMA 4X Enclosure	Standard

AGENCY APPROVALS & WARRANTY	
UL Listings	UL 1449 Listed - Type 2 SPD
Meets ANSI/IEEE C62.41.1 Requirements	Yes
Product Warranty	10 Years
Connected Equipment Warranty	10 Years (See warranty for details)

SELECTION INFORMATION

PHYSICAL SPECIFICATIONS	DESCRIPTION
SA	Whole House Panel Protector
XMFMKIT	Flush Mount Kit

INSTALLATION: SEE USER'S MANUAL


A
B
BREAKER
N
G
• Use closest breaker to SPD
• Locate SPD close to intended breaker
• Keep Leads Short as Possible
• Avoid Sharp Bends
• Rotate SPD such that LED indicator is most visible
• Outdoor installation requires appropriate weather sealing at nipple (sealing conduit, etc.)

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STAGE 1 OR 4

surgeassure™

PANEL OR EXTERIOR SURGE PROTECTOR

S50A

FEATURES & BENEFITS

- **UL 1449 3rd Edition listed Type 1 Surge Protective Device**
- **Versatile Tri-Mount Installation**
- **10 Year product warranty**

The surge**assure**™ S50A shields motor-driven appliances in residential and light commercial applications against electrical power surge damage from entering through the main electrical service panel.

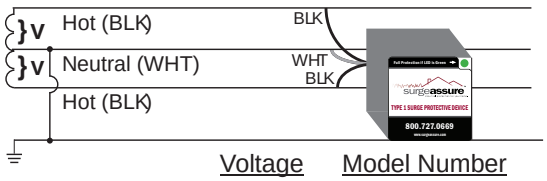
Large-block, individually fused & thermally protected MOVs prevent catastrophic failure.

Green LED light indicates full protection is present. The indicator light is extinguished when protection is no longer present.

S50A has a versatile Tri-Mount that allows for more mounting flexibility including: pipe nipple, bracket, or DIN Rail (accessory available upon request).

Major household electrical and electronic equipment are covered against surge damage for 10 years when S50A is installed by a licensed electrician.

2 POLE / SPLIT



Voltage	Model Number
V= 120V (120/240V)	S50A120V2PS

TECHNICAL SPECIFICATIONS

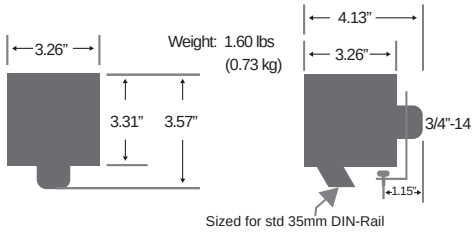
AC SURGE PROTECTION	
Thermal Fusing	Yes
Catastrophic Surge Circuit	Yes
Spike Capacity	50,000 Amps
Line Voltage	120/240 Split Phase 50/60 Hz
Voltage Protection Rating	600V
MCOV Rated Voltage	150V
Response Time	<1 nanosecond
Short Circuit Current Rating	200kA
NEMA 4X Enclosure	Standard

AGENCY APPROVALS & WARRANTY	
UL Listings	1449 3rd Edition - Type 1 SPD
Meets ANS/IEEE C62.41.1 Requirements	Yes
Meets NEMA LS-1	Yes
Product Warranty	10 Years
Connected Equipment Warranty	10 Years (See warranty for details)

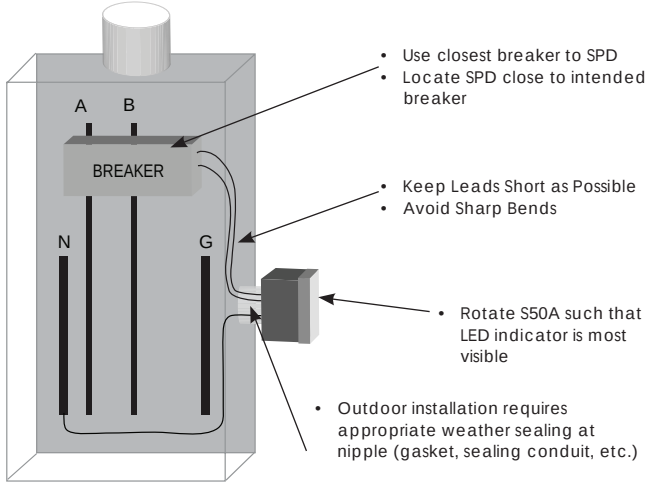
SELECTION INFORMATION

CATALOG #	DESCRIPTION
S50A120V2PS	Whole House Panel Protector

DIMENSIONS



INSTALLATION: SEE S50A USER'S MANUAL


A
B
BREAKER
N
G
• Use closest breaker to SPD
• Locate SPD close to intended breaker
• Keep Leads Short as Possible
• Avoid Sharp Bends
• Rotate S50A such that LED indicator is most visible
• Outdoor installation requires appropriate weather sealing at nipple (gasket, sealing conduit, etc.)

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STAGE 2

surgeassure™

CABLE/PHONE SURGE PROTECTOR

SAVFFF

FEATURES & BENEFITS

- **UL 497C listed Primary Coaxial Protector**
- **Rated for CATV, DSS, TV, VCR and Cable Modem**
- **Easy to install**
- **Standard Female to Female F connector**
- **Low insertion loss**
- **Automatic Recovery**
- **5 year product warranty**

The surge**assure**™ SAVFFF shields coaxial connected electronics in residential and light commercial applications against electrical transient damage from entering through the main cable connection.

Rugged Gas Tube technology prevents catastrophic failure. Includes a section of coaxial cable with female to female splice for line side application.

The surge**assure**™ warranty covers product defects for 5 years.

To have complete protection for your equipment, home or business, it is important to protect AC power lines and all data lines the equipment is connected through.

INSTALLATION INSTRUCTIONS

DO NOT INSTALL DURING ACTIVE STORM CONDITIONS.

This protector is intended to provide surge protection for customer premises and head end equipment. Proper grounding per NEC® code is required. Failure to follow these instructions can result in personal injury and/or equipment damage.

DC Voltage Breakdown Rating (100V/s): 150- 300VDC

1) Properly ground the unit by connecting grounding wire to ground screw on the surge protector and the ground point nearest to the incoming coax cable line.
2) Use the supplied coax cable extension line (if necessary) to connect one end to the input connector of the SAVFFF and the other end to the incoming coax cable line from the cable company or origin point connector of a satellite system.
3) Connect the coax cable line that will extend into the home to the other side of the SAVFFF protector.

TECHNICAL SPECIFICATIONS

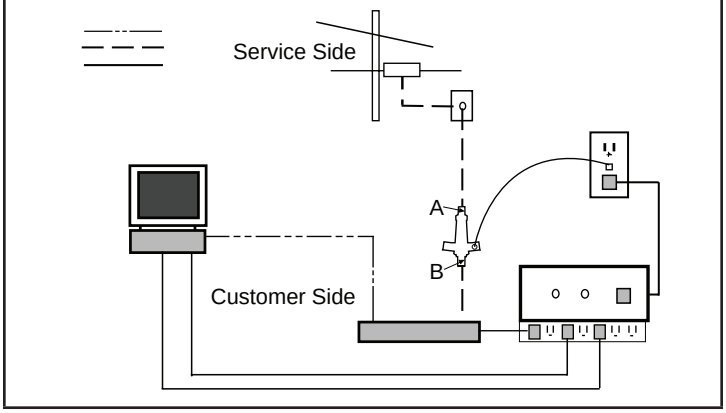
AC SURGE PROTECTION	
Frequency Range	DC thru 1.5 GHz
Catastrophic Surge Circuit	Yes
Spike Capacity	5,000 Amps, 8/20 µSec
Impedance	75 Ohms
Over Current Protection	Yes
Return Loss	30db @ 1GHz
Insertion Loss	<0.1 dB
Response Time	< 1 nanosecond

AGENCY APPROVALS & WARRANTY	
UL Listings	497C
Meets IEEE C62.41.1 Requirements	Yes
Product Warranty	5 years

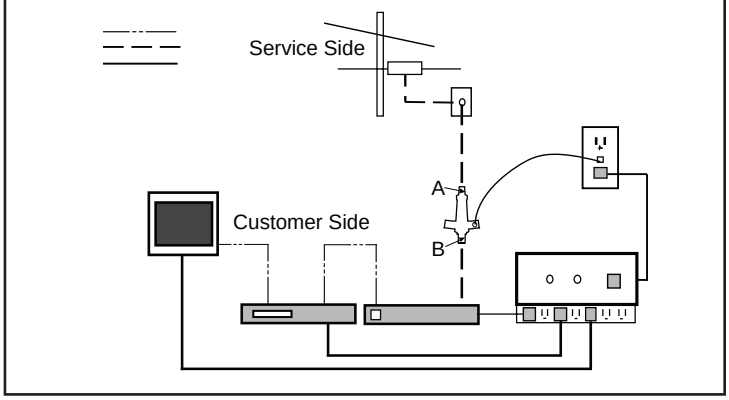
SELECTION INFORMATION

CATALOG #	DESCRIPTION
SAVFFF	F-Type InLine Coax Protector

TYPICAL CABLE MODEM INSTALLATION



TYPICAL CABLE TV INSTALLATION



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surgeassure™

CABLE / PHONE SURGE PROTECTOR

SAT1

FEATURES & BENEFITS

- **UL listed surge protection**
- **Rated for RJ45 or RJ11 Modem/Fax/DSL protection**
- **Easy to install**
- **Standard RJ45 or RJ11 jack**
- **Low insertion loss**
- **Opens up at the end of its useful life**
- **5 year product warranty**

The surge**assure**™ SAT1 protects telephone or modem connected electronics in residential and light commercial applications against electrical transient damage from entering through the main telephone connection.

Multi stage technology prevents catastrophic failure.

Includes one foot section of cable with female to female splice for line side application.

The surge**assure**™ warranty covers product defects for 5 years.

To have complete protection for your equipment, home or business, it is important to protect AC power lines and all data lines the equipment is connected through.

TECHNICAL SPECIFICATIONS

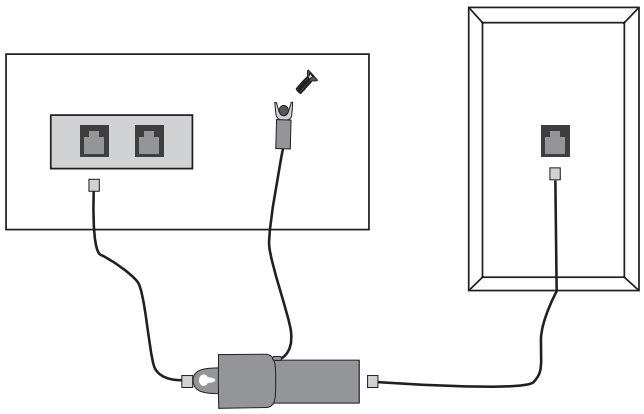
AC SURGE PROTECTION	
Catastrophic Surge Circuit	Yes
Spike Capacity	200 Amps
Let Through Voltage	<260V
Over Current Protection	Yes
Response Time	1 nanosecond
Data Line Protected	3,4,5,6 - RJ45 1-4 RJ11

AGENCY APPROVALS & WARRANTY	
UL Listings	497A
Meets IEEE C62.41.1 Requirements	Yes
Product Warranty	5 years

SELECTION INFORMATION

CATALOG #	DESCRIPTION
SAT1	RJ45 or RJ11 Phone Line Protector

TYPICAL TELEPHONE OR FAX INSTALLATION



INSTALLATION INSTRUCTIONS

DO NOT INSTALL DURING ACTIVE STORM CONDITIONS.

This protector is intended for indoor use only. Failure to follow these instructions can result in personal injury and/or equipment damage.

DC Breakdown Rating (100V/s): 262 - 290VDC

1) Secure the lug on the end of the green grounding wire under a screw at the ground point closest to the incoming telephone line.
2) Use the supplied telephone extension line to connect one end to input jack of the SAT1 protector and the other end to the incoming telephone line jack from the telephone company.
3) Connect the telephone line that will extend into the home to the output jack of the SAT1 protector.

surgeassure™

CABLE/PHONE SURGE PROTECTOR

SATHW2 & SATH2

FEATURES & BENEFITS

- **UL listed surge protection**
- **Hardwired Modem/Fax/DSL protection**
- **Easy to install**
- **Exceptionally fast response time**
- **Available with or without enclosure**
- **5 Year Product Warranty**

The surge**assure**™ SATHW2 is a 2 pair, hardwired surge protector for telephone, DSL or modem connected electronics in residential and light commercial applications. The SATHW2 protects against electrical power surges that can enter through the main telephone connection and is equipped with a failshort device to permanently ground the telephone line in the event of a power cross. The SATHW2 is housed in a weatherproof enclosure to facilitate indoor or outdoor applications. The enclosure is molded of temperature and humidity resistant thermoplastic to resist cracking and discoloration. The cover can be secured with a tie wrap or similar locking device.

The surge**assure**™ SATH2 is the same 2 pair, hardwired surge protector for telephone, DSL or modem used in the SATHW2 but without the weatherproof enclosure. The SATH2 is designed for indoor applications or can be mounted inside another weatherproof enclosure for outdoor mounting applications.

The surge**assure**™ warranty covers product defects for 5 years.

To have complete protection for your equipment, home, or business, it is important to protect AC power lines and all data lines the equipment is connected through.

REPLACEMENT PARTS

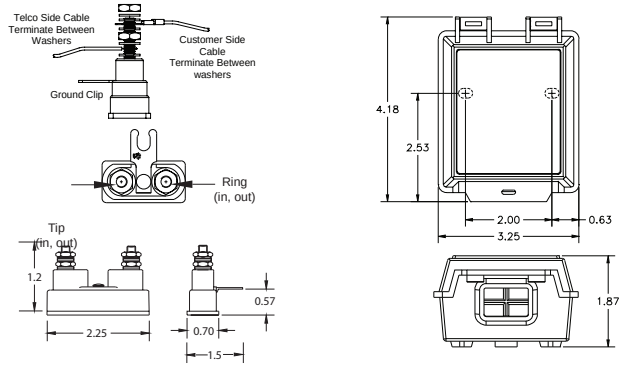
CATALOG #	DESCRIPTION
SATHW2	TM1P - 1 Pair Protection Module (2 required)
	THWE2 - Weatherproof Enclosure, 2 Pair Capacity
SATH2	TM1P - 1 Pair Protection Module (2 required)
	TB1 - Ground Stud Mounting Adaptor

TECHNICAL SPECIFICATIONS

HARDWIRED TELEPHONE SURGE PROTECTION	
Catastrophic Surge Circuit	Yes
Spike Capacity	250A
Let Through Voltage	300V
Over Current Protection	Yes
Response Time	<1 nanosecond
Environmentally Sealed	Yes

AGENCY APPROVALS & WARRANTY	
UL Listings	497A
Product Warranty	5 Years

DIMENSIONS



INSTALLATION INSTRUCTIONS

DO NOT INSTALL DURING ACTIVE STORM CONDITIONS.

This device can be used indoors (SATH2), or outdoors when installed in weatherproof housing (SATHW2). Failure to follow installation instructions can result in personal injury and/or equipment damage not covered by warranty.

SATH2 – For indoor use:

1) SATH2 protects 2 pair (1 pair per protector module) and is intended for indoor use only, with out additional housings.
2) Attach securely to mounting surface.
3) Install ground wire, and if applicable, service shield, under top center nut of mounting bracket and tighten nut securely.
4) TIP IN and TIP OUT are connected to one post. RING IN and RING OUT are connected to the second post on the protection module.
5) Connect one pair (tip and ring) under the bottom nut on each protector module, tip on one post, ring on the other.
6) Connect the customer wiring, tip and ring, under the top nut on the same protector module (protector is wired in parallel).
7) Repeat Tip and Ring Connections on second protection module
8) Check all wiring for loose connections and shorting or broken wires.

SATHW2 – For outdoor use:

1) Mount weatherproof housing securely to flat surface.
2) Conductors will enter and exit from the flexible grommet located at bottom of enclosure.
3) Follow instruction above for SATH2 connections.
4) Secure enclosure with tie wrap or similar locking device.

The SATH2 is a Parallel Device.

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2.3.15.lh #8414

surgeassure™
INTERIOR SURGE PROTECTOR
SAP1 & SAP6T2V1

FEATURES & BENEFITS

- **UL listed surge protection**
- **Rated for 120VAC 15A, grounded outlets**
- **Easy to install for homeowner for individual or multiple appliances**
- **Visual indication of "Protected" & "Grounded" status**
- **Multiple outlet taps have mounting screw**
- **Lifetime Product Warranty**

The surge**assure**™ SAP1 and SAP6T2V1 space saving wall plug protectors are designed for applications where a plug strip is not practical.

The SAP1 is ideal for answering machines, fax machines and any 120 volt appliance such as refrigerators, washing machines, microwave ovens and garage door openers.

The surge**assure**™ SAP6T2V1 is ideal for protecting TV's, computers and any electronic equipment where multiple outlets and a low profile are preferable. Individual outlets can be rotated to different directions for easy usage.

Major household electrical and electronic equipment are covered against surge damage for Lifetime during ownership by the original purchaser when a surge**assure**™ Wall Plug Interior Zone Protector is installed and when surge**assure**™ Main Zone Protectors are installed.

If the SAP1 or SAP6T2V1 surge protector is damaged during the warranty period surge**assure**™ will replace it free of Charge!

TECHNICAL SPECIFICATIONS

AC SURGE PROTECTION	SAP1	SAP6T2V1
Surge Capacity	36,000 Amps	144,000 Amps
Line Voltage	120 VAC	120VAC
Protected AC Outlets	1	6
Phone Lines Protected	N/A	1 IN, 2 OUT
Coax Line Protected	N/A	1
Patch Cord Provided	N/A	Yes
EMI/RFI Filtering	Yes	Yes

AGENCY APPROVALS & WARRANTY	
UL Listings	1449 UL 498, UL 497A
UL 1449 Rating	400V
Product Warranty	Lifetime
*Connected Equipment Warranty	Lifetime (See warranty for details)

*Requires all 3 surge**assure**™ Main Zone Protectors to be installed at the home's incoming service.

SA Series Main Zone Protector

SAT1 and SAVFFF

SELECTION INFORMATION

CATALOG #	DESCRIPTION
SAP1	1 Outlet Wall Plug
SAP6T2V1	6 Outlet Wall Plug with 1 Phone IN 2 OUT, 1 Coax

INSTALLATION INSTRUCTIONS:

DO NOT INSTALL DURING ACTIVE STORM CONDITIONS.

1) If the surgeassureTM protector has a mounting screw, remove the center screw of the receptacle.
2) Plug the protector into the receptacle and secure with the mounting screw.
3) If the protector is equipped with telephone protection, use the supplied telephone extension cord to connect the telephone line from the input jack of the protector to the wall jack. Connect the equipment to the output jack of the protector using the existing telephone cord.
4) If the protector has coax cable protection, connect cable from signal source to the input jack of the protector, and cable from the output jack of the protector to the TV or other protected equipment.
5) Connect the equipment cord(s) into the AC receptacles of the protector.

surgeassure™
INTERIOR SURGE PROTECTOR
SAS8T2V2

FEATURES & BENEFITS

- **UL Listed surge protection**
- **Rated for 120VAC grounded outlets**
- **Installation by homeowner for multiple electronics**
- **Visual indication of "Protected" and "Grounded" status**
- **Lifetime product warranty**

The surge**assure**™ SAS8T2V2 is specially designed for Home Theater and Home Office applications.

The SAS8T2V2 provides protection for 8AC outlets with space for 3 adapter plugs, 2 coax lines and 2 telephone/ fax/modem lines.

The surge**assure**™ SAS8T2V2 surge protector can be securely mounted using the slots provided on the back of the unit.

Major household electrical and electronic equipment are covered against surge damage for Lifetime during ownership by the original purchaser when a SAS8T2V2 is installed and when surge**assure**™ Main Zone Protectors are installed.

If the SAS8T2V2 surge protector is damaged during the warranty period, surge**assure**™ will replace it free of charge!

TECHNICAL SPECIFICATIONS

AC SURGE PROTECTION	
Surge Capacity	144,000 Amps
Line Voltage	120VAC
EMI/RFI Filtering	Yes
Protected AC Outlets	8
Protected Coax Lines	2
Protected Phone Lines	2
Coax Patch Cord Provided	Yes
Phone Patch Cord Provided	Yes

AGENCY APPROVALS & WARRANTY	
UL Listings	1363, 1449 SPD
UL 1449 Rating	330V
Product Warranty	Lifetime
*Connected Equipment Warranty	Lifetime (See warranty for details)

*Requires all 3 surge**assure**™ Main Zone Protectors to be installed at the home's incoming service.

SA Series Main Zone Protector

SAT1 and SAVFFF

SELECTION INFORMATION

CATALOG #	DESCRIPTION
SAS8T2V2	8 AC Outlets, 2 Coax Lines, 2 Telephone/Fax/Modem Lines

INSTALLATION INSTRUCTIONS:

DO NOT INSTALL DURING ACTIVE STORM CONDITIONS.

1) Plug the protector into the receptacle. If the surge**assure**™ protector is equipped with telephone protection, use the supplied telephone cord to connect the telephone line from the input jack of the protector to the wall jack. Connect the telephone equipment to the output jack of the protector using the existing telephone cord.
2) If the protector has coax cable protection, connect cable from signal source to the input jack of the protector and cable from the output jack of the protector to the TV or other protected equipment.
3) Connect the AC cords of the equipment to be protected to the surge**assure**™ protector.
4) Turn on the surge**assure**™ protector using the on/off switch.
5) The indicator lights should be on after the protector has been installed.

surgeassure™
COMMERCIAL PRODUCTS

ADVANCED PROTECTION TECHNOLOGIES INC.

Type 1 SPDs
SPDee Series
SPDee DC Series
TEXCS Series
TEXDS Series
TEXAS Series
TEXAL Series
TEXBS Series
TEXBL Series

Type 2 SPDs
TEHPS Series *Modular*
TEXGA Series *Modular*
TEXMS Series *Non-Modular*

Specialty SPDs
DIN-Rail: AC Power & DC PV
S-Kit Series
iArrest Series

Low Voltage Communication & Data
BNCB5kA
BNCA10kA
DIN-Rail: Popular Traffic / ITS
DIN-Rail: Low Voltage

SPDEE

SPDEE DC

TEXCS

TEXDS

TEXAS

surgeassure™

SPDEE
spee-dee

SURGE PROTECTIVE DEVICE

Features:

- **UL 1449 Third Edition Listed**
- **50kA 8 x 20µs**
- **Type 1 SPD - 20kA I_n & 10kA (cUL Type 2 optional)**
  - 20kA I_n — Meets UL 96A Lightning Protection Master Label
  - Can be installed upstream or downstream of main disconnect
- **200kA SCCR (most models)**
- **All UL-required OCP & Safety Coordination Included Inside**
- **Voltage Specific Design: Performs better than 'one-size fits all'**
- **Tri-Mount Installation for more mounting flexibility:**
  - Same unit mounts on Pipe Nipple, Bracket or DIN-Rail
- **Visual Diagnostics: Easy to See; Easy to Understand**

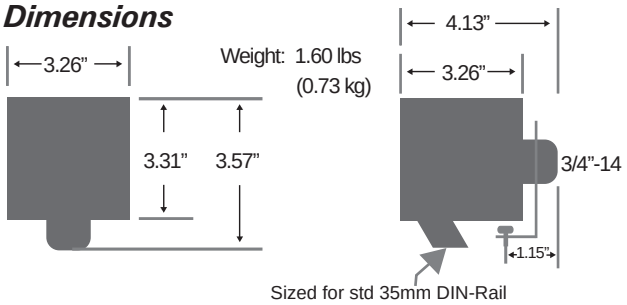
Performance Specifications

- 50kA 8 x 20µs Per Mode
- UL 1449 tested Inominal: 20kA (highest available) + 10kA
- UL 1449 tested SCCR: 200kA (most models)
- Large-Block, 34mm square, 50kA MOVs
- Individually Fused & Thermally Protected MOVs
- UL 1449 Voltage Protection Ratings (VPRs):
  - 600V for 120V, 120/240, 208Y/120
  - 1000V for 277V, 480Y/277V
- Repetitive Impulse: 5000 - 3kA - 8 x 20µs; 1000 - 10kA - 8 x 20µs
- Data table on backpage

Physical Specifications

- Relative Humidity Range: 0 - 95% non-condensing
- Operating Frequency: 47 - 63Hz
- Peak Operating Temperature: +85°C (185°F)
- Typical Operating Temperature: -40°C (-40°F) to +60°C (140°F)
- Response Time: < 1nanosecond
- Solid State Bi-directional Operation
- NEMA 4X Polycarbonate Enclosure—UL746C(f1), UL 94-5VA
- Pre-wired with 3' (1m) of #10 AWG conductor
- Typical Type 2 Connection: #10 AWG to 30A breaker

Dimensions



Green = Go Visual Diagnostic Monitoring

- Green LED = A-OK, Out = replace
- LED Visible from Multiple Sides & Angles - Better Viewing
- Every MOV is Monitored as opposed to 'power is present'

Tri-Mount Installation

Std. 3/4"-14 Nipple

DIN-Rail Mount (rail not incl.)

Bracket Mount for flat surfaces

Options

- N-G protection
- Dry Contact & Audible Alarm
- Dry Contact connection leads exit through nipple via #18 AWG
- Other configurations available for OEM - Call

Quality, Standards & Validation

- 2 year warranty (longer optional)
- UL 1449 Third Edition file: VZCA.E321351 at www.UL.com, cUL
- ANSI/IEEE C62.41.1-2002, C62.41.2-2002, and C62.45-2002
- NEMA LS-1
- IEC 61643, CE
- Burn-In tested prior to shipment
- ISO 9001:2008 Certified Quality Management System
- ISO 17025:2005 Certified Test Lab
- RoHS-compliant

Special *Thank You* to NASA/SATOP for design assistance & validation

SPDEE Model Number Configurator & Options

S 50 A *(Default)* ❑❑ ❑❑ ❑❑

Surge Current Rating	Voltage	System	Options
50 = 50kA/Phase	120V 127V 220V 240V 277V 347V 480V 600V	1P = One Pole, Single Phase 2P = Two Pole, Split Phase 3Y = Three Pole Wye 3D = Three Pole Delta 3H = Three Pole Hi-Leg Delta	N = N-G Protection D = Dry Contact & Audible Alarm 2 = Type 2 SPD Bearing cUL Mark 2

EXAMPLES:

S50A120V3Y
50kA, 120V, 3 pole (208Y/120V)

S50A277V3YN
50kA, 277V, 3 pole (480Y/277V) with N-G

No cost accessories:
8483 Supplementary label

SPDEE Performance Data

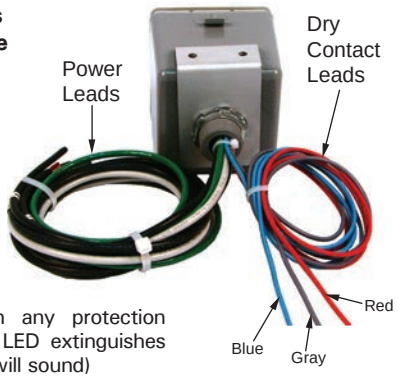
MODEL	System Voltage & Config	UL 1449 THIRD Edition Voltage Protection Rating VPR 3000A				I_n	SCCR	MCOV
		L-N	L-L	N-G*	L-G*			
S50A120V1P	120V	600		600*	1000*	20kA	200kA	150
S50A120V2P	120V/240V	600	1000	600*	1000*	20kA	200kA	150
S50A120V3Y	208Y/120V	600	1000	600*	1000*	20kA	200kA	150
S50A127V1P	127V	700		600*	1200*	20kA	100kA	180
S50A127V2P	127/254V	700	1200	600*	1200*	20kA	100kA	180
S50A127V3Y	220Y/127V	700	1200	600*	1200*	20kA	100kA	180
S50A220V1P	220V-1 pole	1200		1000*	1800*	20kA	200kA	320
S50A220V3Y	380Y/220V	1200	2000	1000*	1800*	20kA	200kA	320
S50A240V3H	120/240V - Hi-Leg Delta	600 /1200	1000 /1500	600*	1000* /1500*	20kA	200kA	150 / 320
S50A240V1P	240V-1 pole	1200		1000	1800	20kA	200kA	320
S50A240V3D	240V Delta - 3 pole		1500		1200	20kA	200kA	320
S50A277V1P	277V	1200		1000*	1800*	20kA	200kA	320
S50A277V2P	240/480V	1200	2000	1000*	1800*	20kA	200kA	320
S50A277V3Y	480Y/277V	1200	2000	1000*	1800*	20kA	200kA	320
S50A347V3Y	600Y/347V	1500	2500	1200*	2500*	20kA	200kA	420
S50A480V1P	480V-1 pole				1800	10kA	200kA	550
S50A480V3D	480V Delta - 3 pole		3000		1800	10kA	200kA	550
S50A480V3H	240/480V - Hi-Leg Delta	1200/ 1800	2500			10kA	200kA	320 / 550
S50A600V3D	600V Delta - 3 pole		2500		2500	20kA	200kA	690
S100A120V2P	120/240V	600	1000		600	20kA	100kA	150
S100A277V2P	240/480V	1000	1800		1000	20kA	100kA	320

* with optional N-G protection

Optional Form C Dry Contact & Audible Alarm

Form C Dry Contact: Three (3) #18 wires exit the pipe nipple Gray is Common, Blue is Normally Open, Red is Normally Closed

- Normally Open: Use Gray & Blue
- Normally Closed: Use Gray & Red

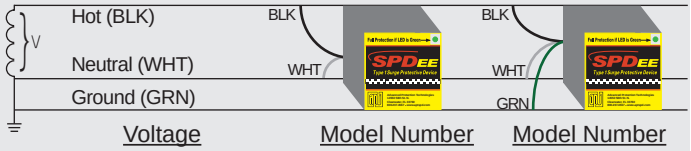


Audible Alarm:
Alarm sounds when any protection is lost (If diagnostic LED extinguishes (i.e. problem), alarm will sound)

SPDEE Application Guide

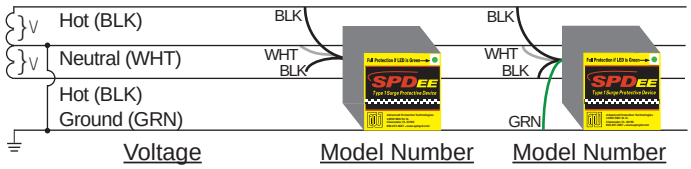
SYSTEM CONFIGURATION	INSTALLED AT OR NEAR SERVICE ENTRANCE OR TRANSFORMER **N-G Bonded** - Does not require N-G protection	INSTALLED >10'(3M) FROM SERVICE ENTRANCE OR TRANSFORMER **Downstream of N-G Bond** - N-G protection suggested

1 POLE / SINGLE



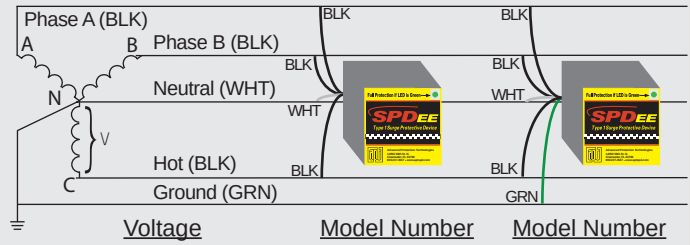
Voltage	Model Number	Model Number
V= 120V	S50A120V1P	S50A120V1PN
V= 127V	S50A127V1P	S50A127V1PN
V= 240V	S50A240V1P	S50A240V1PN
V= 277V	S50A277V1P	S50A277V1PN
V= 480V	S50A480V1P (L-G, not L-N)	N/A

2 POLE / SPLIT



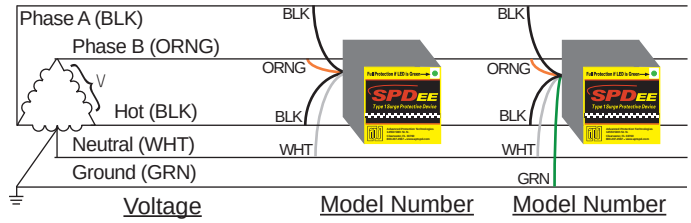
Voltage	Model Number	Model Number
V= 120V (120/240V)	S50A120V2P	S50A120V2PN
V= 127V (127/254V)	S50A127V2P	S50A127V2PN
V= 240V (277/480 or 240/480V)	S50A277V2P	S50A277V2PN

WYE



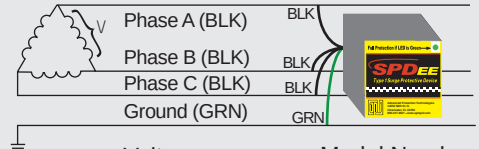
Voltage	Model Number	Model Number
V= 120V (208Y/120V)	S50A120V3Y	S50A120V3YN
V= 127V (220Y/127V)	S50A127V3Y	S50A127V3YN
V= 220V (380Y/220V)	S50A220V3Y	S50A220V3YN
V= 277V (480Y/277V)	S50A277V3Y	S50A277V3YN
V= 347V (600Y/347V)	S50A347V3Y	S50A347V3YN

HI-LEG



Voltage	Model Number	Model Number
V= 120/240V Hi-Leg Delta	S50A240V3H	S50A240V3HN
V= 240/480V Hi-Leg Delta	S50A480V3H	N/A

DELTA



Voltage	Model Number
V= 240V	S50A240V3D
V= 480V	S50A480V3D
V= 600V	S50A600V3D

Corner Grounded Delta?

Use same models & connect one SPD black & green to ground (diagnostics will function correctly)

14550 58th Street North, Clearwater, FL 33760
1.800.727.0669 | www.surgeassure.com

surgeassure™

SPD DC EE

DC Voltage Surge Protective Device

UL Listed to UL 1449-3 Photovoltaic Standard

(VZCA.E321351 & VZCA7.E321351)

- **UL Listed as opposed to Recognized - avoids scrutiny over Technical Considerations of Recognized products**
- **Avoids Certification Surprises**
- **No Unexpected Installation Requirements**

Listed to UL 1449 as DC SPD for use in PV applications

Options & Configurations for OEMs (see back)

Does not require additional upstream fusing for SPD safety protection

- **100kA DC Short Circuit Current Rating (SCCR)**
- **Fail-Safe operation – arc breaking, slide-gate thermal disconnectors built-in**
- **Avoids safety challenges and fusing shortcomings of overseas-standard SPDs**

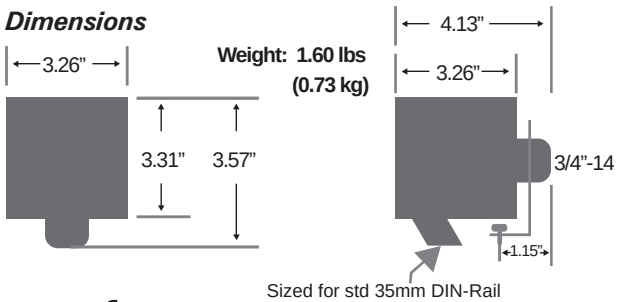
Performance Specifications

- **50kA 8x20µs** Per Mode
- **300VDC, 600VDC, 1000VDC & OEM models**
- All modes of protection: DC+ – G, DC- – G, DC+ – DC-
- UL 1449 tested I_n: 20kA (highest available)
- UL 1449 tested SCCR: 100kA DC
- UL 1449-3 Listed as Type 1 SPD
- UL 1449 Type 2 optional for cUL Mark
- Large-Block arrestor-grade 34mm square MOVs
- Individually Fused and Thermally Protected MOVs
- Repetitive Impulse: 5000 - 3kA-8 x 20µs; 1000 - 10kA-8 x 20µs
- Response Time: < 1nanosecond

Monitoring Configurations

- Standard - Low consumption LED; monitors every MOV
  - Illuminates when power is produced
- Options
  - R - Removes LED and its circuitry
  - M - MOV Microswitch access option (requires R above)

Dimensions



Physical Specifications

- Relative Humidity Range: 0 - 95% non-condensing
- Operating Frequency: DC
- Operating Temperature: -40˚C (-40˚F) to +65˚C (149˚F)
- Solid State Bi-directional Operation
- NEMA 4X Polycarbonate Enclosure – UL746C(f1), UL 94-5VA
- Pre-wired with 3' (1m) of #8 AWG & #6 AWG ground conductor

Tri-Mount Installation - Mounting Kit Included

Std. 3/4"-14 Nipple

DIN-Rail Mount (rail not included)

Bracket Mount for flat surfaces

Quality, Standards & Validation

- 2 year warranty (longer optional)
- ANSI/IEEE C62.41.1-2002, C62.41.2-2002 & C62.45-2002
- Burn-In tested prior to shipment
- ISO 9001:2008 Quality Management System
- ISO 17025: Certified Test Lab
- IEC 61643, CE
- UL 96A Lightning Protection Master Label Eligible

surge assure™
industrial protection for your home.

RoHS 2002/95/EC

A Division of Advanced Protection Technologies, Inc.

14550 58th Street North, Clearwater, FL 33760 | 1.800.727.0669 | APTSurgeassure@emerson.com | www.surgeassure.com

Applications & Models

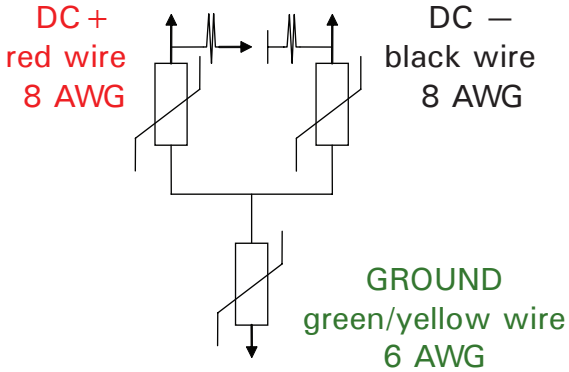
UL 1449-3 Model Number	S50A300VDC	S50A600VDC	S50A1000VDC
DC Voltage	0-300VDC	0-600VDC	0-1000VDC
Maximum Continuous Operating Voltage	424VDC	905VDC	1188VDC
Voltage Protection Level (Up) @ 6kV/3kA	<1000Vp	<2000Vp	<2500Vp

SPDEE DC Model Number Configurator & Options

UL 1449	S50A	Voltage	Options
	50kA default	**300VDC** **600VDC** **1000VDC**	2 = Type 2 SPD bearing cULus Mark (for Canada). R = Removes LED and its circuitry Visual Monitoring via pop-up indicator tabs on each MOV. M = Microswitch option - requires R option above. Allows remote access to logic connected MOV diagnostics. Includes 20 AWG wires out of nipple. Power must be limited to 50mA at 12VDC. G = For Grounding DC + terminal of system.

Examples:
- S50A300VDCRM = 50kA, 300VDC, Remove LED, Microswitch Monitoring
- S50A1000VDC2 = 50kA, 1000VDC, Type 2 marking for Canada

Schematic: All Modes of Protection

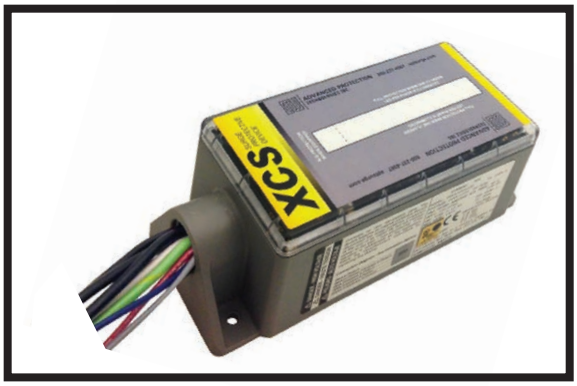


Available Z Mounting Bracket Accessory

AC Voltage *SPDEE*'s Also Available

surgeassure™

TEXCS Series
Type 1 Surge Protective Device/SPD



Features
- **UL 1449 Third Edition Listed**
- **100kA per phase rating**
- **Type 1 SPD –**
  - All UL required OCP & Safety Coordination included inside
  - Can be installed line-side or load-side of main disconnect
- **20kA Inominal (I_n) (most models)**
- **200kA SCCRs (most models)**
- **UL 96A Lightning Protection Master Label compliant (@20kA I_n)**
- **Voltage Specific Design – highly configurable**
- **All MOV suppression elements monitored**

Performance Specifications

Surge Capacities	L-N	L-G	N-G
100kA/phase	50kA	50kA	50kA

- UL 1449 Third Edition Listed
- UL 1449-3 Type 1 SPD (cUL Type 2 optional)
- UL 1449-3 tested Inominal (I_n): 20kA & 10kA
- UL 1449-3 tested SCCR: 200kA & 100kA
- UL 1449-3 Voltage Protection Ratings (VPRs)
  - 208Y/120V: as low as 600V
  - 480Y/277V: as low as 1000V (data table on back)
- Less than 1 nanosecond response time
- Repetitive Impulse: 5,000 hits

Physical Specifications
- Relative Humidity Range: 0 - 95% non-condensing
- Operating Frequency: 47 - 63Hz (also 400Hz on <480V)
- Operating Temperature: -40°C (-40°F) to +85°C (185°F)
- Weight: 3 lbs (1.4 kg)
- NEMA 4X Polycarbonate enclosure – UL 746C(f1) & UL 94-5VA
- Dimensions: 8.3" x 3.0" x 3.7" (211mm x 76mm x 94mm)
- 3/4" threaded hub - weather resistant 4X
- Pre-wired with 3' (1m) of #10 AWG conductor
- Typical connection: #10 AWG and 30A breaker

Design Features
- Designed, Manufactured & Tested consistent with:
  - ANSI/IEEE C62.41.1-2002, C62.41.2-2002, and C62.45-2002
  - NEMA LS-1
  - NEC® Article 285
  - IEC 61643, CE
- High Energy Parallel Design for Category C3 & C-High applications
- For External Mounting next to Switchgear, Motor Controls Centers or Panelboards
- Individually Fused & Thermally Protected MOVs
- Large-Block, 34mm square, 50kA MOVs
- Solid State Bidirectional Operation

Diagnostic Monitoring
- 100% monitoring – Every MOV is monitored, incl. N-G
- Green LED Status indicator per phase
- Phase Loss monitoring (toggles LED & dry contacts)
- Electrically isolated circuitry ensures surges do not damage diagnostics
- Optional: Audible Alarm & Form C Dry Contact (Contact rated 240V, 5A; leads are pre-wired through nipple with #18 AWG)

Quality, Standards & Validation
- UL 1449 Third Edition, (cUL Type 2 optional)
- UL file: VZCA.E321351 at www.UL.com
- RoHS-compliant
- IEC 61643, CE
- 10 year warranty (longer optional)
- Burn-In tested prior to shipment
- ISO 9001:2008 Quality Management System
- ISO 17025:2005 Laboratory Qualification

TE ❑❑ XCS ❑❑ ❑...

Voltage Code for Electrical System

Common North American Systems:

01 = 240/120V Split Phase - 1Ø 3W+Grnd (Fig 1)
02 = 208Y/120V Wye - 3Ø 4W+Grnd (Fig 2)
03 = 240/120V High Leg Delta (B High) (Fig 3)
04 = 480Y/277V Wye - 3Ø 4W+Grnd (Fig 2)
05 = 480V Delta - 3Ø 3W+Grnd (Fig 4) & HRG Wye
08 = 600Y/347V Wye - 3Ø 4W+Grnd (Fig 2)

Other Available Systems - Confirmation encouraged:

15 = 254/127V Split Phase - 1Ř 3W+Grnd (Fig 1)
18 = 480/277V 2-Pole, (480/240V Split Phase) (Fig 1)
21 = 220Y/127V Wye - 3Ř 4W+Grnd (Fig 2)
41 = 520Y/300V Wye - 3Ř 4W+Grnd (Fig 2)
42 = 415Y/240V Wye - 3Ř 4W+Grnd (Fig 2)
43 = 400Y/230V Wye - 3Ř 4W+Grnd (Fig 2)
44 = 440Y/250V Wye - 3Ř 4W+Grnd (Fig 2)
51 = 480V B Corner Grnd Delta, 3Ř 3W+Grnd (Fig 6)
06 = 240V Delta - 3Ř 3W+Grnd (Fig 4)
61 = 240V B Corner Grnd Delta, 3Ř 3W+Grnd (Fig 6)
07 = 380Y/220V Wye - 3Ř 4W+Grnd (Fig 2)
09 = 600V Delta - 3Ř 3W+Grnd (Fig 4) & HRG Wye
91 = 600V B Corner Grnd Delta, 3Ř 3W+Grnd (Fig 6)
11 = 120V Single Phase (Fig 5)
12 = 240V Single Phase (Fig 5) - Not split phase
13 = 127V Single Phase (Fig 5)
14 = 300V Single Phase (Fig 5)
16 = 277V Single Phase (Fig 5)
17 = 480V Single Phase (1 Hot, 1 Neu, 1 Grnd) (Fig 5)

Surge Current Rating

10 = 100kA/Phase

Standard Enclosure Rating

NEMA 4X Non-Metallic
(size 8.3" x 3.0" x 3.7")

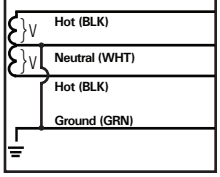
Options

A = Audible Alarm & Dry Contacts Form C, 240V, 5A (pre-wired)
E = Remote Indicator LED on 6' Cable (pre-wired through nipple)
2 = Type 2 SPD bearing cUL Mark

Delete Options - Consult Factory for Order Code
Delete L-N Protection (reduces kA rating)
Delete L-G Protection (reduces kA rating)
Delete N-G Protection (reduces kA rating)

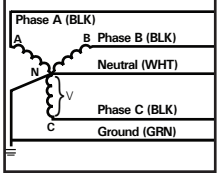
Available Accessory (order separately)
XMFMKIT = Flush Mount Kit
RM = Remote Monitor

Figure 1



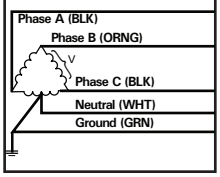
SPLIT
2 Hots, 1 Neu, 1 Grnd

Figure 2



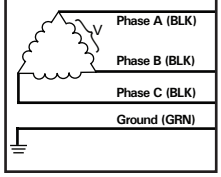
WYE
3 Hots, 1 Neu, 1 Grnd

Figure 3



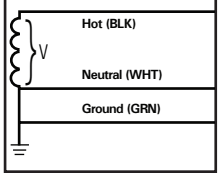
HI-LEG DELTA (B High)
3 Hots, (B HIGH),
1 Neu, 1 Grnd

Figure 4



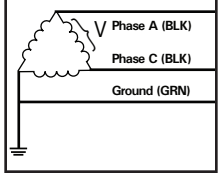
DELTA & HRG WYE
3 Hots, 1 Grnd

Figure 5



SINGLE POLE
1 Hot, 1 Neu, 1 Grnd

Figure 6



CORNER GROUND DELTA (B grounded)
2 Hots, 1 Grnd

Performance Data

Common North American Systems			UL 1449 Third Edition Test Data Voltage Protection Ratings (VPR - 3kA)							
			L-N	**L-G**	**N-G**	**L-L**	**Type**	**I_n**	**SCCR**	**MCOV**
01	=	240/120V Split Phase	600	700	500	1000	Type 1	20kA	100kA	150
02	=	208Y/120V 3Ř Wye	600	700	500	1000	Type 1	20kA	200kA	150
03	=	240Y/120V B High Leg Delta	600/1200	700/1200	500	1000	Type 1	20kA	200kA	150 / 320
04	=	480Y/277V 3Ř Wye	1200	1200	1000	1800	Type 1	20kA	200kA	320
05	=	480V 3Ř Delta	-	1800	-	1800	Type 1	10kA	200kA	552
08	=	600Y/347V 3Ř Wye	1500	1500	1500	2500	Type 1	10kA	200kA	420

Other Available Systems:
Please see supplementary data sheet, contact us at APTSurgeassure@emerson.com or confirm at www.UL.com using CCN of VZCA.

surgeassure™

TEXDS Series
Type 1 Surge Protective Device/SPD

Features:

- **UL 1449 Third Edition Listed**
- **100kA – 200kA per phase ratings**
- **Type 1 SPD –**
  - All UL required OCP & Safety Coordination included inside
  - Can be installed line-side or load-side of main disconnect
- **20kA Inominal (I_n) (most models)**
- **200kA SCCRs (most models)**
- **UL 96A Lightning Protection Master Label compliant (@20kA I_n)**
- **Voltage Specific Design – Highly configurable**
- **All MOV suppression elements monitored**

Performance Specifications

Surge Capacities	L-N	L-G	N-G
100kA/phase	50kA	50kA	50kA
150kA/phase	100kA	50kA	50kA
200kA/phase	100kA	100kA	100kA

- UL 1449 Third Edition Listed, UL 1283 R/C and cUL
- UL 1449-3 Type 1 SPD (cUL Type 2 optional)
- UL 1449-3 tested Inominal (I_n): 20kA & 10kA
- UL 1449-3 tested SCCR: 200kA & 100kA
- UL 1449-3 Voltage Protection Ratings (VPRs):
  - 208Y/120V: as low as 600V
  - 480Y/277V: as low as 1000V (data table on back)
- Less than 1 nanosecond response time
- Repetitive Impulse: 5,000 hits
- AC Sinewave Tracking Filter with EMI/RFI Filtering up to -50dB from 10kHz to 100MHz

Physical Specifications

- Relative Humidity Range: 0 - 95% non-condensing
- Operating Frequency: 47 - 63Hz
- Peak Operating Temperature: +85°C (185°F)
- Operating Temperature: -25°C (-15°F) to +60°C (140°F)
- Weight: 5 lbs (2.3 kg)
- NEMA 4X Polycarbonate enclosure – UL 746C(f1) & UL 94-5VA
- Dimensions: 6" x 6" x 4" (152mm x 152mm x 102mm) (excluding removable mounting feet)
- Lug size: #8 - #10 AWG
- Typical connection: #8 AWG and 40A breaker

Design Features

- Designed, Manufactured & Tested consistent with:
  - ANSI/IEEE C62.41.1-2002, C62.41.2-2002, and C62.45-2002
  - NEMA LS-1
  - NEC® Article 285
  - IEC 61643, CE
- High Energy Parallel Design for Category C3 & C-High applications
- For External Mounting next to Switchgear, Motor Controls Centers or Panelboards
- Individually Fused & Thermally Protected MOVs
- Large-Block, 34mm square, 50kA MOVs
- Solid State Bidirectional Operation

Diagnostic Monitoring

- 100% monitoring – Every MOV is monitored, incl. N-G
- Green LED Status indicator per phase
- Red LED service indicator
- Phase Loss monitoring (toggles LED & dry contact)
- Electrically isolated circuitry ensures surges do not damage diagnostics
- Optional: Audible Alarm & Form C Dry Contact (Contact rated 240V, 5A)

Quality, Standards & Validation

- UL 1449 Third Edition, cUL, UL 1283 R/C
- UL file: VZCA.E321351 at www.UL.com
- RoHS-compliant
- IEC 61643, CE
- 10 year warranty (longer optional)
- Burn-In tested prior to shipment
- ISO 9001:2008 Quality Management System
- ISO 17025:2005 Laboratory Qualification

TE ❑❑ XDS ❑❑ 4X ❑...

Voltage Code for Electrical System

Common North American Systems:

01 = 240/120V Split Phase - 1Ø 3W+Grnd (Fig 1)
02 = 208Y/120V Wye - 3Ø 4W+Grnd (Fig 2)
03 = 240/120V High Leg Delta (B High) (Fig 3)
04 = 480Y/277V Wye - 3Ø 4W+Grnd (Fig 2)
05 = 480V Delta - 3Ø 3W+Grnd (Fig 4) & HRG Wye
08 = 600Y/347V Wye - 3Ø 4W+Grnd (Fig 2)

Other Available Systems - Confirmation encouraged:

15 = 254/127V Split Phase - 1Ř 3W+Grnd (Fig 1)
18 = 480/277V 2-Pole, (480/240V Split Phase) (Fig 1)
21 = 220Y/127V Wye - 3Ř 4W+Grnd (Fig 2)
41 = 520Y/300V Wye - 3Ř 4W+Grnd (Fig 2)
42 = 415Y/240V Wye - 3Ř 4W+Grnd (Fig 2)
43 = 400Y/230V Wye - 3Ř 4W+Grnd (Fig 2)
44 = 440Y/250V Wye - 3Ř 4W+Grnd (Fig 2)
51 = 480V B Corner Grnd Delta, 3Ř 3W+Grnd (Fig 6)
06 = 240V Delta - 3Ř 3W+Grnd (Fig 4)
61 = 240V B Corner Grnd Delta, 3Ř 3W+Grnd (Fig 6)
07 = 380Y/220V Wye - 3Ř 4W+Grnd (Fig 2)
09 = 600V Delta - 3Ř 3W+Grnd (Fig 4) & HRG Wye (Available: 100kA)
91 = 600V B Corner Grnd Delta, 3Ř 3W+Grnd (Fig 6) (Available: 100kA)
11 = 120V Single Phase (Fig 5)
12 = 240V Single Phase (Fig 5) - Not split phase
13 = 127V Single Phase (Fig 5)
14 = 300V Single Phase (Fig 5)
16 = 277V Single Phase (Fig 5)
17 = 480V Single Phase (1 Hot, 1 Neu, 1 Grnd) (Fig 5)

Surge Current Rating

10 = 100kA/Phase
15 = 150kA/Phase
20 = 200kA/Phase

Enclosure Rating

4X = NEMA 4X Non-Metallic (size 6" x 6"x 4")

Options

A = Audible Alarm & Dry Contacts, Form C, 240V, 5A

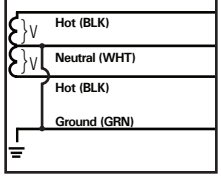
2 = Type 2 SPD Bearing cUL Mark

A version of this product is available with a Remote Display connected via ribbon cable. Contact factory for data sheet and specifics.

Delete Options - Consult Factory for Order Code
Delete L-N Protection (reduces kA rating)
Delete L-G Protection (reduces kA rating)
Delete N-G Protection (reduces kA rating)
Delete Noise Filtering

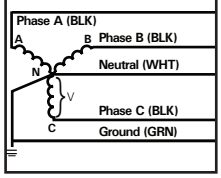
Available Accessory (order separately)
KITFMXF = Flush Mount Kit
RM = Remote Monitor

Figure 1



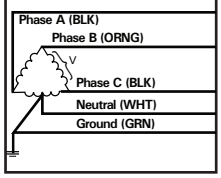
SPLIT
2 Hots, 1 Neu, 1 Grnd

Figure 2



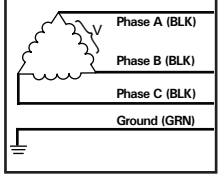
WYE
3 Hots, 1 Neu, 1 Grnd

Figure 3



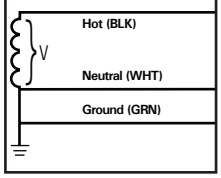
HI-LEG DELTA (B High)
3 Hots, (B HIGH),
1 Neu, 1 Grnd

Figure 4



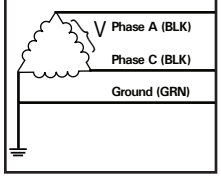
DELTA & HRG Wye
3 Hots, 1 Grnd

Figure 5



SINGLE POLE
1 Hot, 1 Neu, 1 Grnd

Figure 6



CORNER GROUND
DELTA (B grounded)
2 Hots, 1 Grnd

Performance Data

Common North American Systems			UL 1449 THIRD Edition Test Data Voltage Protection Ratings (VPR - 3kA)							
			L-N	L-G	N-G	L-L	Type	I_n	SCCR	MCOV
01	=	240/120V Split Phase	700	700	600	1000	Type 1	20kA	100kA	150
02	=	208Y/120V 3Ø Wye	700	700	600	1000	Type 1	20kA	200kA	150
03	=	240Y/120V B High Leg Delta	700/1200	700/1200	600	1000/2000	Type 1	20kA	200kA	150 / 320
04	=	480Y/277V 3Ø Wye	1200	1200	1200	2000	Type 1	20kA	200kA	320
05	=	480V 3Ø Delta	-	1800	-	2000	Type 1	10kA	200kA	550
08	=	600Y/347V 3Ø Wye	1500	1500	1500	2500	Type 1	10kA	200kA	420

Other Available Systems:
Please see supplementary data sheet, contact us at APTSurgeassure@emerson.com or confirm at www.UL.com using CCN of VZCA.

surgeassure™

TEXAS Series
Type 1 Surge Protective Device/SPD

Features:

- **UL 1449 Third Edition Listed (Sept 2009)**
- **100kA – 500kA per phase ratings**
- **Type 1 SPD –**
  - All UL required OCP & Safety Coordination included inside
  - Can be installed line-side or load-side of main disconnect
- **20kA Inominal (most models)**
- **200kA SCCRs (most models)**
- **UL 96A Lightning Protection Master Label compliant (@20kA I_n)**
- **Voltage Specific Design – Highly configurable**
- **All MOV suppression elements monitored**
- **Optional Rotary Disconnect Switch**

Performance Specifications

Surge Capacities	L-N	L-G	N-G
100kA/phase	50kA	50kA	50kA
150kA/phase	100kA	50kA	50kA
200kA/phase	100kA	100kA	100kA
250kA/phase	150kA	100kA	100kA
300kA/phase	150kA	150kA	150kA
400kA/phase	200kA	200kA	200kA
500kA/phase	250kA	250kA	250kA

- UL 1449 Third Edition Listed, cUL, UL 1283 R/C
- UL 1449-3 Type 1 SPD (cUL Type 2 optional)
- UL 1449-3 tested Inominal: 20kA & 10kA
- UL 1449-3 tested SCCR: 200kA & 100kA
- UL 1449-3 Voltage Protection Ratings (VPRs):
  - 208Y/120V: as low as 600V
  - 480Y/277V: as low as 1000V
- Less than 1 nanosecond response time
- Repetitive Impulse: 5,000 hits
- AC Sinewave Tracking Filter with EMI/RFI Filtering up to -50dB from 10kHz to 100MHz

Diagnostic Monitoring

- 100% monitoring – Every MOV is monitored, incl. N-G
- Green LED Status indicator per phase
- Red LED service indicator
- Audible Alarm with Silence Switch
- Test Function: toggles red service LED, audible alarm & dry contact (if equipped)
- N-G overvoltage detection
- Phase Loss monitoring (toggles LED & dry contacts)
- Electrically isolated circuitry ensures surges do not damage diagnostics
- Form C Dry Contacts, 240V, 5A (two sets)
- Optional Surge Counter, six-digit LCD, with test function, reset & no-maintenance Eprom memory

Design Features

- Designed, Manufactured & Tested consistent with:
  - ANSI/IEEE C62.41.1-2002, C62.41.2-2002, and C62.45-2002
  - NEMA LS-1
  - NEC Article 285
  - IEC 61643
- High Energy Parallel Design for Category C3 & C-High applications
- For External Mounting next to Switchgear, Motor Controls Centers or Panelboards
- Individually Fused & Thermally Protected MOVs
- Large-Block, 34mm square, 50kA MOVs
- Replaceable Module Construction
- Solid State Bidirectional Operation

Physical Specifications

- Relative Humidity Range: 0 - 95% non-condensing
- Operating Frequency: 47-63Hz
- Operating Temperature: -25°C (-15°F) to +60°C (140°F)
- Weight: 24 lbs (11 kg)
- Standard NEMA 1/12/3R/4 enclosure
- Standard size: 12" x 12" x 7" (305mm x 305mm x 177mm)
- Lug size: #2 - #14 AWG (w/opt. disconnect: #6 - #1/0)
- Typical connection: #6 AWG and 60A breaker

Quality, Standards & Validation

- UL 1449 Third Edition, cUL, UL 1283 R/C
- UL file: VZCA.E321351 at www.UL.com
- RoHS-compliant
- IEC 61643, CE
- 10 year warranty (longer optional)
- Burn-In tested prior to shipment
- ISO 9001:2008 Quality Management System
- ISO 17025:2005 Laboratory Qualification

TE ❑❑ XAS ❑❑ ❑❑ ❑...

Voltage Code for Electrical System

Common North American Systems:

01 = 240/120V Split Phase - 1Ø 3W+Grnd (Fig 1)
02 = 208Y/120V Wye - 3Ø 4W+Grnd (Fig 2)
03 = 240/120V High Leg Delta (B High) (Fig 3)
04 = 480Y/277V Wye - 3Ø 4W+Grnd (Fig 2)
05 = 480V Delta - 3Ø 3W+Grnd (Fig 4) & HRG Wye (450kA replaces 400kA or 500kA)
08 = 600Y/347V Wye - 3Ø 4W+Grnd (Fig 2)

Other Available Systems - Confirmation encouraged:

15 = 254/127V Split Phase - 1Ř 3W+Grnd (Fig 1)
18 = 480/277V 2-Pole, (480/240V Split Phase) (Fig 1)
21 = 220Y/127V Wye - 3Ř 4W+Grnd (Fig 2)
41 = 520Y/300V Wye - 3Ř 4W+Grnd (Fig 2)
42 = 415Y/240V Wye - 3Ř 4W+Grnd (Fig 2)
43 = 400Y/230V Wye - 3Ř 4W+Grnd (Fig 2)
44 = 440Y/250V Wye - 3Ř 4W+Grnd (Fig 2)
51 = 480V B Corner Grnd Delta, 3Ř 3W+Grnd (Fig 6) (450kA replaces 400kA or 500kA)
06 = 240V Delta - 3Ř 3W+Grnd (Fig 4) (450kA replaces 400kA or 500kA)
61 = 240V B Corner Grnd Delta, 3Ř 3W+Grnd (Fig 6) (450kA replaces 400kA or 500kA)
07 = 380Y/220V Wye - 3Ř 4W+Grnd (Fig 2)
09 = 600V Delta - 3Ř 3W+Grnd (Fig 4) & HRG Wye (Available: 100kA, 150kA, 200kA, 250kA)
91 = 600V B Corner Grnd Delta, 3Ř 3W+Grnd (Fig 6) (Available: 100kA, 150kA, 200kA, 250kA)
11 = 120V Single Phase (Fig 5)
12 = 240V Single Phase (Fig 5) - Not split phase
13 = 127V Single Phase (Fig 5)
14 = 300V Single Phase (Fig 5)
16 = 277V Single Phase (Fig 5)
17 = 480V Single Phase (1 Hot, 1 Neu, 1 Grnd) (Fig 5)

Surge Current Rating

10 = 100kA/Phase
15 = 150kA/Phase
20 = 200kA/Phase
25 = 250kA/Phase
30 = 300kA/Phase
40 = 400kA/Phase
45 = 450kA/Phase
(Voltage Codes 05, 51, 06 & 61)
50 = 500kA/Phase

Options

X = Surge Counter, six-digit LCD counter includes maintenance-free Eprom memory backup
E = Remote Locatable Display on 4 ft Cable custom cable lengths available
F = Noise Filtering - Extended Range & Attenuation (available on 400kA & 500kA models)
D = Rotary Disconnect Switch, Bussmann, UL98
T = Thru-Door Rotary Disconnect Switch, Bussmann, UL98, E1 enclosure only (Consult factory for other disconnect switch options)
2 = Type 2 SPD Bearing cUL Mark

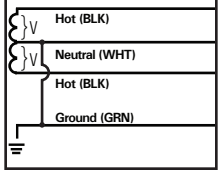
Delete Options - Consult Factory for Order Code
Delete L-N Protection (reduces kA rating)
Delete L-G Protection (reduces kA rating)
Delete N-G Protection (reduces kA rating)
Delete Noise Filtering

Available Accessory (order separately)
RM = Remote Monitor

Enclosure Rating

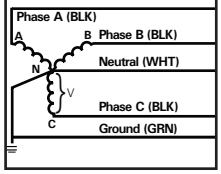
E1 = NEMA 1/12/3R/4 (size: 12" x 12" x 7")
4X = NEMA 4X Non-Metallic (size: 14" x 12"x 6")
(polycarbonate, display inside clear front door)
4S = NEMA 4X Stainless Steel (size: 12" x 12"x 6")
(display inside door)
FM = NEMA 1 Flush Mount (wall cavity size: 12" x 12"x 6" deep)
P1 = NEMA 1 pullbox 'indoor' (size: 12" x 12" x 6") includes 'E' option
(Optional rotary disconnect increases enclosure sizes to 16" x 14" x 6" on models > 300kA)

Figure 1



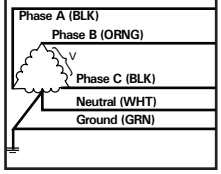
SPLIT
2 Hots, 1 Neu, 1 Grnd

Figure 2



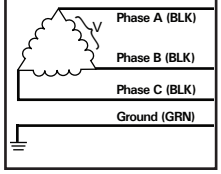
WYE
3 Hots, 1 Neu, 1 Grnd

Figure 3



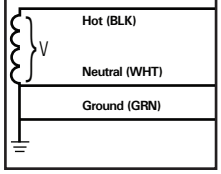
HI-LEG DELTA (B High)
3 Hots, (B HIGH),
1 Neu, 1 Grnd

Figure 4



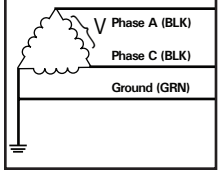
DELTA & HRG WYE
3 Hots, 1 Grnd

Figure 5



SINGLE POLE
1 Hot, 1 Neu, 1 Grnd

Figure 6



CORNER GROUND
DELTA (B grounded)
2 Hots, 1 Grnd

Performance Data

Common North American Systems			UL 1449 THIRD Edition Test Data Voltage Protection Ratings (VPR - 3kA)							
			L-N	L-G	N-G	L-L	Type	I_n	SCCR	MCOV
01	=	240/120V Split Phase (<300kA)	700	700	700	1200	Type 1	20kA	100kA	150
01	=	240/120V Split Phase (=>300kA)	700	600	600	1000	Type 1	20kA	100kA	150
02	=	208Y/120V 3Ř Wye (<300kA)	700	700	700	1200	Type 1	20kA	200kA	150
02	=	208Y/120V 3Ř Wye (=>300kA)	700	600	600	1000	Type 1	20kA	200kA	150
03	=	240Y/120V B High Leg Delta	700/1200	700/1200	700	1800	Type 1	20kA	200kA	150 / 320
04	=	480Y/277V 3Ř Wye (<300kA)	1200	1200	1200	2000	Type 1	20kA	200kA	320
04	=	480Y/277V 3Ř Wye (=>300kA)	1200	1000	1000	1800	Type 1	20kA	200kA	320
05	=	480V 3Ř Delta (<300kA)	-	1800	-	1800	Type 1	10kA	200kA	550
05	=	480V 3Ř Delta (=>450kA)	-	1800	-	1800	Type 1	20kA	200kA	550
07	=	380Y/220V 3Ř Wye (<300kA)	1200	1200	1200	2000	Type 1	20kA	200kA	320
08	=	600Y/347V 3Ř Wye (<300kA)	1500	1500	1500	2500	Type 1	10kA	200kA	420
08	=	600Y/347V 3Ř Wye (=>300kA)	1500	1500	1500	2500	Type 1	20kA	200kA	420

Other Available Systems:
Please see supplementary data sheet, contact us at APTSurgeassure@emerson.com or confirm at www.UL.com using CCN of VZCA. Optional disconnect switch may increase VPRs.

surge**assure**™ is the residential division of Advanced Protection Technologies and Emerson Network Power, a worldwide leader in the surge protection industry. We have been in the surge protection business since 1985. Our primary goals are to save you time and money when dealing with SPD's and keeping your customers home safe from surges. We have an "equal" to any competitive product, and we strive to offer the most competitive pricing in the market.

We are the manufacturer. All residential products are built in our Clearwater, Florida factory and are in stock ready for shipping. In addition to our residential products we also have a full line of commercial/industrial products. For your light commercial applications we offer site survey assistance to help recommend surge protection to your customers. Commercial products are also built in our Clearwater, Florida factory and have a 7-10 day building time.

Electrical engineers are on staff that can be reached during business hours when you are in the field when technical/installation questions surface. We value the client relationship and support it with integrity, responsiveness, and technical excellence. We serve our clients with a long term commitment through actions, not words alone.

EMERSON
Network Power

ADVANCED PROTECTION TECHNOLOGIES INC.

WE AT surge**assure**™ WELCOME THE OPPORTUNITY TO WORK WITH YOUR ORGANIZATION AND KNOW WE CAN HELP YOU GROW YOUR BUSINESS AS WE HAVE DONE FOR HUNDREDS OF CONTRACTORS ACROSS THE COUNTRY. WE WILL PROVIDE YOU WITH THE TOOLS AND SUPPORT NECESSARY TO BUILD A HIGHLY PROFITABLE SURGE PROTECTION PROGRAM.

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THE surgeassure™ DIFFERENCE

Residential Services

We offer the following services to assist you with your residential Surge Protection requirements.

- **FREE** customized marketing literature
- **FREE** online sales tools
- **FREE** interactive online training
- **FREE** Contractor Referral network
- Toll free telephone assistance, with a live person
- Unparalleled response times and customer support
- Competitive pricing with purchasing options to fit your business plan
- No stocking or minimum purchase requirements
- UL 1449 3rd Edition listed products that meet the NEC® 2008 requirements

PRODUCTS & BROCHURES

SA Series

SATH2

SAVFFF

SAT1

Customizable Tri-fold Brochure (8.5" x 11") - *Free!*

4 Page Brochure (11" x 17") - *Free!*

Our primary goal is to exceed your expectations. Our customer service is unparalleled, so please do not hesitate to contact us.

It's easy to get started! Don't Wait...Contact us today!

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SPD Sizing Chart

XAS

XDS

XCS

SPDEE

Service Entrance Greater than 2000A				
Exposure Level	**High Exposure**	**Medium Exposure**	**Low Exposure**	**Lowest Exposure**
kA per phase	300 kA	200 kA	150 kA	100 kA
Model	XAS30	XAS20	XAS15	XDS10

Service Entrance 1200A - 2000A				
Exposure Level	**High Exposure**	**Medium Exposure**	**Low Exposure**	**Lowest Exposure**
kA per phase	250 kA	200 kA	150 kA	100 kA
Model	XAS25	XAS20	XDS15	XCS10

Service Entrance 800A - 1200A				
Exposure Level	**High Exposure**	**Medium Exposure**	**Low Exposure**	**Lowest Exposure**
kA per phase	200 kA	150 kA	100 kA	50 kA
Model	XDS20	XDS15	XCS10	SPDEE

Distribution/Branch Panel 800A - 1200A				
Exposure Level	**High Exposure**	**Medium Exposure**	**Low Exposure**	**Lowest Exposure**
kA per phase	200 kA	150 kA	100 kA	50 kA
Model	XDS20	XDS15	XCS10	SPDEE

Distribution/Branch Panel Less than 800A				
Exposure Level	**High Exposure**	**Medium Exposure**	**Low Exposure**	**Lowest Exposure**
kA per phase	150 kA	100 kA	100 kA	50 kA
Model	XDS15	XDS10	XCS10	SPDEE

PRICING & PRODUCT INFORMATION

Call 800.727.0669 or visit *www.surgeassure.com*

surge**assure**™ Warranty
Terms, Conditions and Limitations

I. **SPD WARRANTY COVERAGE**: During the time period (the "Warranty Term") stated below and subject to all Conditions and Limitations stated below, surge**assure**™ warrants to the original purchaser who purchases a new Surge Protection Device (the "SPD") directly from surge**assure**™ or its authorized distributor that the SPD is free of any significant defect in design, materials and workmanship and further warrants the SPD against damage by electrical surge (except and excluding any sustained over-voltage and any direct lightning strike). Should the SPD be determined to be defective or damaged by electrical surge during the applicable Warranty Term, surge**assure**™ will either repair the SPD or replace it with a product of like kind and quality for the benefit of the original purchaser, at the election of surge**assure**™.

Main Zone Products	
SPD Model	**Warranty Term**
S50A, SA060000	10 years after purchase date
TE/1C40, C40E	10 years after purchase date
SAT1, SATL	5 years after purchase date
SATH2, SATHW2, SATHW6	5 years after purchase date
SAV1	5 years after purchase date
SAVFFF, SACX	5 years after purchase date

Interior Zone Products	
SPD Model	**Warranty Term**
SAP1	Lifetime during ownership by original purchaser
SAP6T2V1	Lifetime during ownership by original purchaser
SAS8T2V2	Lifetime during ownership by original purchaser

Exterior Zone Product	
SPD Model	**Warranty Term**
SPDEE	2 years after purchase date
S50A	2 years after purchase date

II. CONNECTED EQUIPMENT COVERAGE: THE CONNECTED EQUIPMENT COVERAGE UNDER THIS WARRANTY IS SECONDARY TO ANY OTHER APPLICABLE POLICY, INCLUDING BUT NOT LIMITED TO, HOMEOWNERS INSURANCE, MANUFACTURERS WARRANTIES, SERVICE CONTRACTS AND EXTENDED WARRANTY PLANS. COVERAGE SHALL APPLY TO ONLY THAT PORTION OF THE COSTS FOR REPAIR OR REPLACEMENT THAT EXCEEDS THE LIMITS OF COVERAGE UNDER THE ABOVE MENTIONED POLICIES AND DOES NOT COVER DEDUCTIBLES REQUIRED BY OTHER POLICIES. During the applicable Warranty Term stated above and subject to all Conditions and Limitations stated below, surge**assure**™ will pay the actual cost to repair or replace, with like kind and quality, each item of Covered Equipment, as hereinafter defined, which is properly connected to an SPD covered by the SPD Warranty and is damaged by an electrical surge (except and excluding any sustained over-voltage and any direct lightning strike), subject to the Coverage Limits stated below. Pre-configured packages, or "Kits" that include properly connected Main Zone Products, model SA060000, S50A, TE/MSP4, TE/1C40, C40E, TE/1C or R40I with the addition of a properly installed SAT1, SATL, SATHW2, SATH2 and SAV1, SAVFFF or SACX, are warranted for a period of 10 years, subject to all Conditions and Limitations stated below.

Covered Equipment: "Covered Equipment" means and includes: 1) a washer, dryer, refrigerator, freezer, HVAC unit located inside the house, trash compactor, dishwasher, garbage disposal, stove, and a stove with an integral microwave oven sharing the same wiring, if the damaged item is properly connected to a warranted SPD at the time of the electrical surge that causes the damage; and 2) if the damaged item is properly connected to a warranted Exterior Zone Product at the time of the electrical surge that causes the damage, then the Covered Equipment will additionally include exterior HVAC equipment, pool pump and irrigation system pump; and 3) if the damaged item is properly connected to a warranted Interior Zone Product at the time of the electrical surge that causes the damage, then Covered Equipment will additionally include any other item of electronic appliance or equipment such as a computer, printer, TV, VCR, DVD player, stereo, radio, telephone, answering machine, fax machine, vacuum equipment, hot tub, microwave oven unit which is not an integral part of the stove, and garage door opener. Security systems and medical equipment are **NOT** included and are specifically excluded from Covered Equipment.

Coverage Limits: Coverage for damaged Covered Equipment which requires repair or replace is limited to a maximum of $1,500.00 per damaged item and shall not exceed a total of $25,000.00 for all damaged Covered Equipment. If the damaged Covered Equipment is properly connected to a Main Zone SPD model SA060000, S50A, TE/MSP4, TE/1C40, C40E, TE/1C or R40I with the addition of a properly installed SAT1, SATL, SATHW2, SATH2 and SAV1, SAVFFF or SACX at the time of the electrical surge that causes the damage, the limit of coverage shall be increased to a maximum of $3,000.00 per damaged item and shall not exceed a total of $100,000.00 for all damaged Covered Equipment. Coverage shall only apply to that portion of the costs for repair or replacement which exceeds the limits of coverage under any policy of insurance applicable to the electrical surge occurrence which caused the damage to the Covered Equipment and the limits of other applicable coverage, including without limitation any homeowners insurance policy, manufacturer's warranty, service contracts or extended warranty plans.

III. CONDITIONS AND LIMITATIONS:

3.1 Assignment: THIS WARRANTY MAY NOT BE ASSIGNED. The defective or damaged SPD and each item of damaged Covered Equipment must have been purchased directly from surge**assure**™ or from an authorized distributor and be owned by the original purchaser of the SPD at the time of warranty claim. Proof of purchase must be provided to surge**assure**™ with each notice of claim.

3.2 Conditions: The surge**assure**™ Warranty applicable to every SPD and the Covered Equipment Coverage are subject to and conditioned upon the following requirements being fully satisfied:

(a) The electrical system into which the SPD is installed must be properly grounded in full satisfaction of NEC® or CEC requirements.

(b) The SPD must be properly installed and connected in compliance with surge**assure**™ instructions by a licensed electrician or electric utility company personnel and in accordance with the requirements stated below:

(1) Main Zone Protectors: surge**assure**™'s AC Protectors (SA0600000, S50A, TE/1C40 and C40E) and incoming cable/telephone (SAV1, SAVFFF, or SACX and SAT1, SATL, SATH2, or SATHW2) protectors are recommended to be installed by a licensed electrician or electric utility personnel. surgeassure™ installation instructions and diagrams must be followed. The TE/1C40 and C40E must be installed to a spare two-pole 20A breaker, and the S50A or SA060000 must be installed to a spare two-pole 30A breaker. The installation wires should be trimmed to be as short as possible. When installed, the appropriate indicator lights must be illuminated along with no audible alarm sounding. Installation must conform to the most current applicable codes (NEC® or CEC). The AC power electrical system must be properly grounded and the phone and coax ground must be bonded to the AC Power ground per NEC® requirements.

(2) Interior Zone: surge**assure**™'s AC plug-in and UPS protectors must be directly plugged into a properly grounded 3-wire AC outlet. Extension cords, non-grounded two prong adapters, or other non-surge**assure**™ products must not be used. Building wiring and other connections to protected equipment must conform to applicable codes (NEC® or CEC). All wires (including: AC power lines, telephone lines, signal/data lines, coaxial cables, antenna lead-ins) leading into the protected equipment must first pass through a single surge**assure**™ protector designed for that particular application. The protector and the equipment to be protected must be indoors in a dry location, and in the same building. surge**assure**™ installation instructions and diagrams must be followed.

(3) Exterior Zone Protectors: surge**assure**™'s HVAC, irrigation, or pool pump (TE/1SSA or SPDEE) protector is recommended to be installed by a licensed electrician. surge**assure**™ installation instructions and diagrams must be followed. Installation must conform to the most current applicable codes (NEC® or CEC).

(c) The SPD must be used at all times in the manner for which it is designed and intended by surge**assure**™.

(d) The SPD must not have been modified or altered in any way.

(e) surge**assure**™ must receive written notice of any SPD defect within 30 days following discovery of the defect and written notice of any damage caused by electrical surge within 30 days following the occurrence.

(f) The SPD will be inspected by surge**assure**™ for electrical surge damage. The SPD must show signs of electrical surge damage or must perform outside (greater than 10%) of design specifications for surge protection capability.

3.3 Limitations: To the fullest extent permitted by law, and except for the expressed surge**assure**™ Warranty and the Connected Equipment Coverage stated herein, surge**assure**™ does not make and specifically disclaims any and all implied warranties, including warranties of merchantability and/or fitness for a particular use. In the event of a determination by surge**assure**™ that an SPD is defective or has failed during the applicable Warranty Term, the responsibility of surge**assure**™ will be limited to: 1) the repair or replacement of the SPD with a like kind and quality product, at the discretion of surge**assure**™; and 2) paying the cost to repair or replace damaged covered equipment, whichever amount is less. surge**assure**™ shall not be responsible for consequential or incidental damages, including without limitation damages to equipment and loss of revenue. surge**assure**™ shall not be responsible for charges related to the shipping of the damaged SPD to surge**assure**™ for inspection.

IV. GENERAL PROVISIONS:

4.1 Applicable Law: All terms and provisions of the surge**assure**™ Warranty and Connected Equipment Coverage shall be construed by, under and in accordance with the laws of the State of Florida, unless such application of law is specifically prohibited in any venue having proper jurisdiction to resolve issues involving the surge**assure**™ Warranty and the Connected Equipment Coverage.

4.2 Dispute Resolution: Any claim, demand or issue pertaining to an SPD, the surge**assure**™ Warranty and/or the Connected Equipment Coverage shall be settled and resolved by Arbitration administered by the American Arbitration Association under its Commercial Arbitration Rules. The Arbitration shall be conducted before a single arbitrator in Pinellas County, Florida. Any decision rendered in such Arbitration shall be final and binding upon all parties. The Arbitrator shall not award either party special, exemplary, consequential, punitive, incidental or indirect damages or attorney's fees. The Arbitration costs and Arbitrator fees shall be equally divided between the parties, and each party will pay its own Attorney's Fees.

4.3 Notice: Any notice to surge**assure**™ shall not be deemed to be made unless and until it is received by surge**assure**™ at the address stated below:

surge assure™
industrial protection for your home.

14550 58th Street North Clearwater, Florida 33760
1.800.727.0669 • APTSurgeassure@Emerson.com
www.surgeassure.com
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